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ABSTRACT

There is more to teaching than the teacher possessing a body of information and using group dynamics in passing the information to the students. Teachers must be enthusiastic in order to motivate their students to progress through the levels and stages of learning. One-to-one teaching can be better achieved and more successful through the study of behavior and the individual verification of ideas. The teacher's role in this age of new training methods is to explain not only concepts but also the different expressions used to refer to them. Teachers must understand how students assimilate and analyze information and teach accordingly. Telematics, one of the most important sources of information, can be used to obtain data on students' ability to understand, analyze, and transmit information. (Author/MSE)

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DOES TEACHING INVOLVE INFORMING?

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

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ABSTRACT

The author of this article contends that there is more to teaching than the teacher possessing a body of information and using group dynamics in passing the information to the students. One-to-one teaching could be better used through the study of behavior and the individual verification of ideas. The author refers to research in the utilitarian verification of ideas and the frequency of error, and he takes note of the difficulties inherent in translation. The role of the teacher in this age of new training methods is clear. He must not only explain concepts but also the different expressions used to refer to them. Also cited is the use of questionnaires and the student analysis of information. The author considers telematics to be a most important source of information.

The answer to this question seems obvious if notice is taken of the fact that the ultimate aim of all teaching is to give information and to ensure that the students assimilate that information.

That aim presupposes that the teacher has the information corresponding to the goal he has fixed according to the specific circumstances of the particular group. Thus, he has to have the willingness and daily opportunity throughout the whole year, including vacation time, to inform himself by every means at his disposal in the technological world of 1981.

As for the second part, the means of making sure that the information is understood and assimilated, only a short time ago, the important thing was to have solid pedagogical principles. The techniques of group dynamics, and of motivation and methods, were the cornerstones of the whole enterprise. These procedures still have some value today, but only to a much lesser extent.

When using these methods, teachers have too often forgotten the entire foundation of all true communication. Motivation should not be contributed by

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the students but by the teacher. The learner can see only the final goal that he aims to achieve and cannot see the situation clearly enough to distinguish the successive stages through which he must pass. When teaching these successive stages, the teacher comes up against a feeling of inertia which was for a long time confused with the absence of motivation. He will then be unable to create the motivation he had hoped for, which is in fact quite out of the question and should be attempted only at risk of suicide on the part of the teacher. The important thing is for him to have time to find and constantly adapt the elements of the problem to be solved. His job is to weigh up the problem again and again so as to discover the elements which constitute it, which vary constantly. He should not simply solve the problem, for it can be posed by no one but himself. For that reason the communicative situation becomes real only through the art of the teacher in asking questions and getting the students to supply such solutions as the student could not have suggested himself. The situation is, therefore, one of exchange. A simple example of something that the author has lived through is that of the apprentice as a printer and machine controller. He had to spend long weeks getting to know the different parts of the machine, then in getting rid of faults and possible breakdowns, then learning the art of preparing a text, fitting it into a chassis, and much else. Each of these steps requires long practice before the apprentice is prepared to put them all together and start copy editing. However, each of these operations is considered by the apprentice as deeply boring in itself. Only the foreman, thanks to his long experience and reflection, can separate the operation into its various fragments, none of which taken alone will motivate the apprentice, but each of which is indispensable if ever motivation is finally to be achieved. In this particular field the foreman has the role of the teacher.

TWO CATEGORIES

When one is considering the constitutive elements of all teaching one by one, two different categories are found. The first is the teaching of behavior in a sense which has nothing to do with politeness or discipline but which has to do with the flexible attitude in the face of the notions to be understood; what is meant here is an orientation towards a spirit of curiosity which comes to everyone and which the teacher must channel to the best effect. The case of chemistry should be cited here. A student who sets out to study this subject must above all have an intellectual attitude, a love of precision, and, of course, great delicacy, very different from the superficial conception of chemistry as a set of recipes. Chemistry students also have a problem with foreign languages. The acquisition of a foreign language is not at all the same thing as the acquisition of the native language, as we believed for a long time. This idea led to the use of certain teaching methods of which the shortcomings are still felt. The idea of primary acquisition is of use only for the mother tongue, or for

another language learned at the same time and in the same conditions of total linguistic immersion. On the contrary, the acquisition of another language requires in the first place the learning of a new form of behavior, and this differentiation should be insisted upon where beginners are concerned. In practice, it is quickly realized that the so-called "notional/functional" methods cannot be efficiently introduced into the course unless they have been preceded by a behavioral course.

This presupposes, as for every subject, previous study on the part of the teacher in a much more delicate form than for the mere teaching of knowledge as such. In fact, for each situation there is a corresponding behavior and therefore a specific way of expressing oneself. With a foreign language each form of behavior brings with it a specific structure which shows that grammatical structure is very closely connected with behavior, or, more exactly, with a certain attitude. An example of this is the difference between "How do you do?" and "How are you?" In the same way, the translation of the French "Comment allez-vous?" by the German "Wie gehen Sie?" shows that the difference consists entirely in the differentiated attitude in a given situation, which brings one to say "Wie geht es Inhen?" The list of differentiated forms of behavior makes it possible to prepare for the beginner a lexico-structural syllabus completely built on the differences in behavior from one language to another. In this way, in a group which includes students from very different countries such as Tunisia, Senegal, Venezuela, and so on, the teaching of English can be approached only through the scale of specifically British or American forms of behavior in authentic situations. Real communication can be obtained in this manner because it is possible to understand the mentality of the countries of which the language is being learned and thus grasp the corresponding expressions and concepts.

In this second element one problem which can often occur with this approach is that of teaching in groups. No group pedagogy enables the teacher to ensure the assimilation of the correspondence between the behavior, the structure, and the lexical item. The group lesson, or perhaps, group meeting, can be of use here only as a period for giving directives and settling difficulties. However, cummunication is known to be an exchange and, consequently, verification and mutual help. For that reason at this stage the student must be able to verify his acquisition of ideas for himself in the first place, and second, for the teacher to test him when the moment of truth comes. That means that each student must have the opportunity to practice in a repetitive way – (easily obtained) by listening to recordings – so that he can learn the specific expressions. Thus the student needs both equipment and time. The teacher, using a system of questions which has been very carefully set up (see *The Teaching of Languages for Special Purposes*, by the same author) will go on to individual work sessions, which is the only authentic communicative situation. The repetition of these individual communicative sessions, however short they

may be, will give life to what has been learned and make it genuinely available for use by the student. It becomes clear, however, that to get the desired result – and it is necessary to insist on the fact that this method has been tested and verified – the teacher needs four times as much time as he would when he is teaching in group lessons. This figure has been exactly calculated in *Teaching in the Year 2,000* by the same author.

FREQUENCIES

This individualized form of teaching presupposes prior research on what may be called utilitarian frequencies of occurrence, that is to say, the frequencies corresponding to the expressions which must be available to the student. To this must be added research on the frequency of error, which allows effective individualization of the work. All this requires a great deal of time. Individualized communication is also justified by the particular circumstances in which the knowledge acquired is to be used. In the case of the telephone, the absence of a sufficient quantity of the right kind of words can prevent communication completely. The lack of facial expression showing affirmation or negation must of necessity give rise to a greater amount of verbal communication. A lack of courtesy is also felt with much greater force. For example, an English switchboard operator who answers "Yes, dear?" seems much more agreeable than a Parisian one, who answers "J'écoute." Attitudes and words are intimately connected in the mind of whoever has to evaluate a person as in the case of recruiting interviews. Examples could easily be multiplied. In one way or another, it is clear that a teacher must be a communications specialist.

These phenomena also occur on a completely different level, that of translation. In fact, the author is working in Paris on the development of a data bank, and the data are classified by the differentiation of forms of behavior and their frequencies. In this way the most frequent questions on a basic level were seen to be, in French, those that begin with "Quel . . . . " Examples are "Quelle heure est-il?," "Quel temps fait-il?," "Quel est le plus court chemin pour . . . ,?" "Quel est le prix?" The translation of these expressions into English gives a high frequency of "What . . . ?," as in "What's the time?," "What time is it?," "What's the weather like?," but also "Which is the shortest way to . . . ?," and then "How much is it?" The German version gives "Wieviel Uhr ist es?," "Wie ist das Wetter?," "Welch ist der Kürzste Weg nach . . . ?," and "Wieviel kostet . . . ?" Clearly, here the frequencies in French do not correspond to the frequencies identified in either of the two other languages. This leads to a problem in the classification of data in the microprocessor. If a classification according to the first word of the expression is adopted, the classification will vary from one language to another. At present the use of data banks is still confused as regards, on the one hand, recording, and, on the

other, the length of the expressions, taking into account the limits imposed by the size of the machines. Another method, which makes use of what neurologists call short term memory, is currently being tried out. Extensive study has established that one term in every series (of terms) is remembered more easily than the others, which are quickly forgotten. The conclusions of the research undertaken in Paris were that those terms referring to inanimate objects were fixed first in the memory: whereas, in the case of animated beings, it was the verb indicating the action performed by them, or what happened to them, which took precedence. Thus such frequent common expressions as "time" and "duration" could not properly be classified according to their frequency.

The problem of recovery has become unexpectedly urgent because of the increasing importance of conferences taking place which make use of telematic language to a particular country. The more advanced industrial companies are starting to use the new methods, because the experts have every power except that of taking the definitive decision. The executive must be consulted and the market forces considered, so that decisions are delayed correspondingly. For that reason, round-tables using computer terminals and television screens and allowing a direct exchange of views between participants are becoming more and more the order of the day. In these circumstances the rapidity of decision making depends on a perfect understanding of the different languages. Knowing the enormous volume of translation work involved in the Council of Europe, the difficulties inherent in extending this practice to an international/worldwide scale can easily be imagined. Thus easy access to data banks is seen to be of paramount importance.

The role of the teacher with the new training methods adopted is very clear. The interference between the approach through the different forms of psychological behavior and the approach through the world of expression becomes immediately obvious.

One must remember that each message has a content. After the fundamental forms of communication discussed above become what may be called "technical communication," in which "technical" has a very wide sense, including everything which is not part of fundamental, daily human contact, but has to do with the study of a particular problem, whether technological, scientific, medical, or economic. From this point of view there are specialized expressions which must be available to the student, and which are not just lists of words, but groups of words, or even whole phrases, called "patent sentences." The acquisition of these phrases must go hand in hand with a precise understanding of the concepts to be expressed. The data banks established in Paris are now used by numerous science research centers as well as by medical centers and international organizations. The same problem as with the fundamental language occurs here, but with much greater urgency. Contrary to what is commonly believed by readers of scientific articles in a foreign language who are under the impression that they can limit themselves to their special fields and

think that they can catch the general meaning of the article by a series of guessing games, the real problem consists first in the interference between one special field and another – the only means of progress – and second, the impossibility of translating word for word, precisely because of the different psychological approach. Anyone translating by looking up each word in turn in an English or a German dictionary would produce totally incomprehensible nonsense. Moreover, there is the added difficulty of the different uses of a single term according to the field, in which it is applied. Note, for example, the different uses of the English "turnover." A teacher must therefore not only explain the concepts to be learned with great precision but must also make sure that the students who have to use them know the different expressions used to refer to them. Thus the person who can best transmit specialized concepts from one language to another is not, as was until recently believed, the specialist, but rather the linguist, who must, through his very obligations in the modern, rapidly evolving world, become sufficiently pluridisciplinary to master more easily and thus to express more clearly the different specialized concepts. This point must be emphasized. Because of this fact, linguists have had to establish data banks consisting of international lexical expressions, stored according to their frequency of occurrence. Beyond the mere transposition from one language into another, the linguist allows the specialist in this way to come to a better understanding of the other specialities by offering him a synoptical table of expressions. This table is used in the different fields and makes possible the study of a concept through its expression and also the study of the expression through the concept.

An important stage in teaching is that, before introducing a given problem, the teacher must make sure that his students possess all the necessary knowledge. At this stage the teacher must draw up a sufficiently detailed questionnaire – here the technique of multiple choice questions is of considerable importance – and play his true role of guide rather than of judge. Important knowledge can be communicated by this means. After this, the development of concepts becomes the primary concern. When studying literature or civilization, science, technology, or economics, the information that the student receives comes obviously from the teacher but also from such widely varied sources as newspapers, radio, television, and telematic devices. The teacher's role thus becomes that of a critic who must encourage the student to analyze his information by making use of what he already knows and bearing in mind not merely his previous experience but also the predictable consequences of his conclusions, which is an essential part of all the information in its economic, social, or material context.[1] This skill is difficult but essential. In other words, the teacher must channel the information, just as in the case of the initial training discussed above. The individualization of teaching becomes of

[1] What is useful in one country must be examined in great detail to make sure that it can be applied in another. The student must learn to beware of misleading information, which seems superficially objective but is taken out of context.

paramount importance, and the group lesson, even more than elsewhere, can be of use only as a period of directives and suggestions and comment.

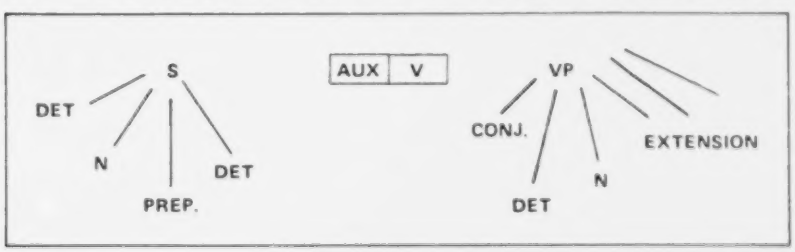
TELEMATICS

Telematics is one of the most important sources of information used on this level. The list of publications dealing with whatever occupies a researcher's interest can be obtained with unprecedented speed. There are, however, three obstacles to successful communication:

1. The importance of spelling. A simple mistake with a hyphen can prevent access to important data.
2. The selection of the keyword. In spite of the catalogs available, the choice is often difficult because the researcher is expected to follow the same thought processes as whoever has previously studied the problem if he is to discover the relevant keyword. The unexpected consequence is that it is necessary to have studied a problem in some detail in order to benefit properly from the information supplied by telematic means even to locate this information. In the search for the keyword, the same problems occur as in the methods involved with different forms of intellectual behavior. It is necessary to adopt the same intellectual behavior as the specialist whose work is to be examined in order to have access to it.
3. The danger of the misinterpretation of data. This can occur when information is taken out of the appropriate behavioral or material context. Information can also be misleading, and there are added complications to do with scientific and industrial espionnage.

One must learn how to obtain information and then how to make use of it; but to be able to transmit that information to others is just as important.

Here written translation becomes of great importance. Machine translation is under development so as to simplify this work, and research is already at an advanced stage. The difficulties encountered on this subject are the same as those associated with the data banks of international lexical expressions. There are problems of recovery and classification. In this case the storage should be in relation to the order required within a particular group of words, and so could



quite easily be arranged in alphabetical order, as the computer's memory bank is much more powerful than that of the data bank. The ordering can be carried out according to the classical tree diagrams.

The problem arises of where to place what are here called "patent sentences" and to discover which element will allow them to be inserted globally in the text. Several solutions are being considered, but none seems as yet to be completely satisfactory. It is a very important question, for the use of patent sentences would save a great deal of time, and there is ample justification for optimism.

In fact, every day, there are vast quantities of knowledge and information — such as human relations, and problems with written correspondence, which can be transmitted only from someone with experience to someone with less experience. Whoever needs to be convinced of this fact is invited to spend a day in the author's office where it may be observed that there is a knock at the door approximately every three minutes. That is a consolation, for it shows that human contact is more important than any other form of communication.

Other Articles on Communication by This Author

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